

CLAIMS

What is claimed is:

1. An exhaust gas recirculation control system for an engine comprising:

a valve that controls recirculation of exhaust gas in the engine between an exhaust manifold and an intake manifold; and

a controller that communicates with the valve and opens the valve after the engine is turned off to allow the exhaust gas into the intake manifold.

2. The exhaust gas recirculation control system of claim 1 wherein the controller determines if there is exhaust gas in the intake manifold.

3. The exhaust gas recirculation control system of claim 2 wherein the controller reduces fuel delivery to the engine at a subsequent engine startup if there is exhaust gas in the intake manifold.

4. The exhaust gas recirculation control system of claim 3 wherein the controller sets a flag that indicates that the exhaust gas is in the intake manifold, and wherein the controller reduces the fuel delivery if the flag is set.

5. The exhaust gas recirculation control system of claim 1 wherein the controller opens the valve to a desired position that is determined according to at least one of ambient temperature and an engine type.

6. The exhaust gas recirculation control system of claim 5 wherein the engine type is indicative of the amount of exhaust gas the engine is operable to receive at engine startup.

7. An exhaust gas recirculation control system for an engine comprising:

a valve that controls recirculation of exhaust gas in the engine between an exhaust manifold and an intake manifold; and

a controller that communicates with the valve and:

opens the valve after the engine is turned off to allow the exhaust gas into the intake manifold;

sets a flag that indicates that the exhaust gas is in the intake manifold; and

reduces fuel delivery to the engine at a subsequent engine startup if the flag is set.

8. The exhaust gas recirculation control system of claim 7 wherein the controller opens the valve to a desired position that is determined according to at least one of ambient temperature and an engine type.

9. The exhaust gas recirculation control system of claim 8 wherein the engine type is indicative of the amount of exhaust gas the engine is operable to receive at engine startup.

10. A method for controlling exhaust gas recirculation in an engine at engine startup comprising:

turning off the engine;

opening a valve that allows exhaust gas into an intake manifold after the engine is turned off;

initiating an engine startup.

11. The method according to claim 10 further comprising:

determining if there is exhaust gas in the intake manifold;

and

reducing fuel delivery to the engine at the engine startup if there is exhaust gas in the intake manifold.